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AUTHOR	Farber, Irvin J.
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ABSTRACT

A program was designed to allow key research, planning, and instructional personnel of the School District of Philadelphia to begin exploring the usefulness of simulation for planning purposes in the school system. Twenty-nine school district personnel participated in a city model game in which members of the several sectors of the "city" interact and make decisions according to the instructions of the game's developers. Because of hardware difficulties, the program did not reach its desired goal. As a result of the study, it is recommended that a careful examination of the current state of simulation and the models available be conducted before trying such programs in schools. (Author/SP)

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RESEARCH TRAINING REPORT
Project No. 9-8029
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EVALUATION OF A PROGRAM TO TRAIN SCHOOL DEVELOPMENT AND RESEARCH SPECIALISTS IN THE USE OF SIMULATION MODELS

IRVIN J. FARBER
OFFICE OF RESEARCH AND EVALUATION
SCHOOL DISTRICT OF PHILADELPHIA
Twenty First Street and Parkway
Philadelphia, Penna. 19103

MARCH 1970

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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Technical Report No. 7016

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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SUMMARY

This program was designed to allow key Research, Planning, and Instructional personnel of The School District of Philadelphia to begin exploring the usefulness of simulation models for planning purposes in the school system.

School District personnel (twenty-nine in all) played the City Model Game of Applied Simulations International, Inc. (A.S.I.) in Washington, D. C. on December 4th through 6th, 1969.

During the play period, members of the several sectors of the "city" interacted and made decisions according to the instructions of the A.S.I. staff. Activities were less than meaningful, however, because the first computer output was incorrect and had to be recalled. Next the computer became overloaded and broke down, and participants were not able to use the model at all. Thus, during the entire period, the group played only one round.

The project did not reach its desired goal in that it generated no further exploration of the use of simulation as an aid to planning in the school system. This was due largely to the failure of the model to operate. Another contributing factor was that the program was premature. Exposure of a large number of Research, Planning, and Instructional personnel should have been preceded by a more intensive and extensive investigation by a much smaller group.

The following recommendations appear to be justified by the experiences with, and reactions to, this project:

1. Conduct an intensive and extensive investigation of the current state of simulation, including models available, before becoming involved with specific models or model development.

2. Thoroughly investigate the operation of any particular model (i.e., stage of development, instructional effectiveness, backup system, etc.) before exposing a large number of people to it.

3. Conduct an intensive investigation of simulation programs available for instructional purposes, to the end that specific recommendations can be made as to the desirability and feasibility of trying them in the schools.

4. After going through the above three steps, investigate the desirability of conducting a limited trial of Telecity, the High School Simulation Model of Applied Simulations International, Inc. in Philadelphia.

INTRODUCTION

Decision makers in urban education are faced with a critical need to forecast the consequences of alternative courses of action available to them. Their ability to do this has been limited by lack of information, failure to identify goals and objectives, and the lack of a method that would enable them to predict the probable consequences of proposed policy decisions with some degree of accuracy.

This program was designed to allow key Research, Planning, and Instructional personnel of The School District of Philadelphia to begin exploring the usefulness of simulation models for filling this need in the school system. School District personnel involved in this program played the City Model Game of Applied Simulations International, Inc. in Washington, D. C. on December 4th through 6th, 1969. Discussions about simulation were held with A.S.I. staff members. A questionnaire was subsequently administered to participating personnel to elicit their thinking about the experience and about possible future action, if any, which should be taken.

The objectives of this program were:

1. To familiarize key Research and Planning personnel in the Philadelphia School System with the nature and operation of a sophisticated simulation model.

2. To provide a learning experience which can be used as a springboard for thinking about the possibility of developing a simulation model, or models, for use in The Philadelphia School System.

3. To explore the possibilities of using simulation models to:
   a. Aid in educational decision making.
   b. Train educational administrators.
   c. Select personnel for educational administration positions.

4. To explore the possibility of collaborating with Applied Simulations International, Inc. in the development of a model to be used by The School District of Philadelphia.

5. To develop in the personnel responsible for the development and evaluation of new educational programs a heightened awareness of the great extent to which the various aspects of the urban problem are interrelated.

6. To improve the planning skills of the participants by:
   a. Demonstrating the need for cooperation among many different groups in attempting to make any progress in the solution of the problems of urban America.
   b. Demonstrating the effect that time has on decisions.

c. Demonstrating the possible commonality of interests even among competing forces.

A total of 29 persons, holding the following positions, participated in this project:

1. Superintendent, District 2
2. Associate Superintendent for Policy Planning and Development
3. Executive Director for Data Processing
4. Executive Director for Research and Evaluation
5. Director of Administrative and Survey Research
6. Director, Early Childhood Programs
7. Director, English-Language Arts
8. Director, Instructional Computer Center
9. Director of Instructional Research and Development
10. Director, Systems Planning and Development
11. Director of Testing
12. Assistant Director, Title I Evaluation
13. Manager, Developmental Research
14. Manager, Field Research Services
15. Supervisor of Testing
16. Research Associate for Design and Analysis
17. Research Associates (8) - various positions
18. Assistant to Superintendent of schools
19. Policy Planners (3)
20. Research Trainee

In addition to the personnel listed above, the project was visited by the Executive Deputy Superintendent and the Deputy Superintendent for Instruction.

DESCRIPTION OF THE PROGRAM

During the period December 4-6, 1969, twenty-nine members of the Research, Planning, and Instructional staffs of The School District of Philadelphia participated in the City Model Game of Applied Simulations International, Inc. in Washington, D. C. The model which was used was the second generation model of this organization. This model was used because City I, the first generation model and the one referred to in the proposal, is no longer operational. The A.S.I. staff indicated that the current model is more sophisticated than the original one.

The first evening of the project was devoted to a general orientation and assignment of roles. During the next two days game activities were engaged in according to the instructions of the A.S.I. staff. Activities were less than meaningful, however, because at first the computer output was incorrect and had to be recalled, and then the computer broke down and participants were not able to use the model at all. Members of the several sectors of the "city" interacted and made decisions, but there was no feedback. Thus, during the entire period the group played only one round. This had a decidedly negative effect on the morale of the participants.

A general discussion session was held during which participants were able to ask questions of the designer of the city model. There were, of course, many individual, informal discussions with various members of the A.S.I. staff.

The City Manual, which set forth the procedures of the game, was sent (and distributed) to participants a week before the project. It was rather difficult to use, however, and was really helpful only after one had participated for a while. The group was told by the A.S.I. staff that the Manual had originally been prepared by the programmers and re-written for users. It appeared that further refinement (i.e., making it more user-oriented) would be required before the Manual would become really helpful.

SUMMARY OF RESPONSES TO THE SIMULATION MODEL QUESTIONNAIRE

QUESTION	RESPONSE			
	Yes	No	Undecided	Yes in some respects and no in others
1. Do you feel that you have gained added familiarity with a "Sophisticated Simulation Model?"	18	7	1	3
2. Do you believe that the Philadelphia School System can benefit from the use of the City II (the one we played) Simulation Model?	11	14	4	
3. Do you feel that the Computerized Simulation Model of a (our?) school system would have value:	Yes	?	No	
a. As an aid in making decisions about school, district, or school system administration?	18	5	6	
b. As an aid in making decisions about curricular offerings?	5	14	10	
c. As an aid in the training of educational administrators?	22	5	2	
d. As an aid in the selection of administrative personnel?	6	14	9	
4. We were told that City II took about two years to build and cost about $300,000. Do you think that a Computerized School System Model would be of sufficient benefit to the Philadelphia School System to justify this kind of investment?	Yes	No	Undecided	
	9	11	9	
5. If there had been no computer "hang ups" and the model had operated as described, what value would the experience have had for you in your present position with The School District of Philadelphia?	0	No value at all		
	6	Little value		
	13	Moderate value		
	7	Great value		
	0	Very great value		
	3	No response		
6. Do you feel that the City II Model was successful in:	Yes	?	No	No response
a. Demonstrating the need for cooperation among many different groups in attempting to make any progress in the solution of the problems of urban America.	18	6	4	1
b. Demonstrating the effect that time has on decisions.	15	6	7	1
c. Demonstrating the possible commonality of interests even among competing forces.	17	9	2	1

EVALUATION OF THE PROGRAM

The activities reported above were not intended to be the sum of this program. Its major intent was to explore the area of simulation to the end that subsequent applications and adaptations of the approach would be considered for use in the school system. For this reason, it was considered appropriate to elicit the reactions of the participants to the experience and determine their judgments about various applications of simulation.

Generally, the questionnaire used followed the lines of the stated objectives, and will be reported in that way. Representative statements by participants will also be included to further amplify reactions. Summary statements and reactions of participants expressed in informal conversation will also be included where appropriate. Since division of the data by function of participant (i.e., Planning, Research, Instruction) and by responsibility (i.e.,Managerial - Non-Managerial) of participant showed no consistent differences, responses of participants will be treated in one analysis.

The instrument distributed and the covering memo for it are in the Appendix.

Questions relating to the specific model used will be presented first and then those relating to simulation in general.

Objective 1: To familiarize key Research and Planning personnel in the Philadelphia School System with the nature and operation of a sophisticated simulation model.

Question 1: Do you feel that you have gained added familiarity with a "Sophisticated Simulation Model?"

Response:

[18]	Yes
[7]	No
[1]	Undecided
[3]	Yes in some respects and no in others

(Note: Number in parentheses is number responding in each category. Some participants made more than one response).

Representative remarks of those responding "Yes."

(8) 1. This was an initial experience using a simulation model, and some familiarity with it was gained.

(5) 2. I gained a better understanding of what is involved in simulation (i.e., problems involved and what it is supposed to do).

(3) 3. I gained a better understanding of the potential of simulation.

(3) 4. I gained a greater awareness of the complexities of the city.

Representative remarks of those responding "no."

(5) 1. Because the model was not working (due to computer failure).

(2) 2. Because the model is not really "sophisticated" (i.e., the number and kind of decisions were too few and oversimplified).

Representative remarks of those responding "undecided."

(1) 1. The promises of the model were unfulfilled.

Discussion:

For most participants this was an initial exposure to simulation, and they were fascinated by the prospect. For them, anything learned was to some degree an advance over prior knowledge. When it was impossible to play the game, most participants became angry, frustrated, and somewhat bitter. Reactions expressed during informal conversations during and after the program were much more negative and vehement than those on the questionnaire. Several even questioned the existence of the model!

Though most participants indicated that they had learned something about simulation, they were not really able to explore its possibilities during this project.

One conclusion is quite clear and obvious from this experience: Under no conditions should we again take the time of highly paid staff and the expense of transporting them several hundred miles to use a computerized simulation model without first being convinced of the adequacy of its back-up system. Applied Simulations International, Inc. had no backup system whatever!

Objective 2: To provide a learning experience which can be used as a springboard for thinking about the possibility of developing a simulation model, or models, for use in the Philadelphia school system.

Question 2: Do you believe that the Philadelphia school system can benefit from the use of the City II (the one we played) simulation model?

Response:

11	Yes
14	No
4	Undecided

Representative remarks of those responding "yes."

(6) 1. It would be useful for staff development purposes.

(3) 2. It would be useful for instructional purposes.

(2) 3. It would be useful as a planning tool.

Representative remarks of those responding "no."

(5) 1. It does not specifically address the problems and decisions facing the school system.

(3) 2. The City Model is not a good simulation model (i.e., its approach is primitive. It does not take into account what has been learned from military simulation, for example).

(2) 3. The model was not operative when we played it.

(2) 4. The model is too complex.

Representative remarks of those responding "undecided."

(1) 1. Simplified version could be used with students.

(1) 2. I have reservations about the cost-benefit ratio.

(1) 3. There are evidently serious bugs in the model program itself.

Discussion:

The reaction of the participants to the City Model was a function both of the group's experience with it and of the nature of the model itself. Since the model is not predictive (and the A.S.I. staff stressed this point), it was perceived as instructional software more than as a planning tool. Since the group found the model inoperative, there was no opportunity to develop any other perception.

This strongly suggests that the purposes of this project would have been better served by a more thorough examination of a variety of simulation models. Possibly a small group should have made an intensive study of the area and introduced the larger group to their more promising findings.

Question 4: We were told that City II took about two years to build and cost about $300,000. Do you think that a computerized school system model would be of sufficient benefit to the Philadelphia school system to justify this kind of investment?

Response:

9	Yes
11	No
9	Undecided

Representative remarks of those responding "yes."

(4) 1. It would facilitate better planning (i.e., pinpointing relationships; allowing trial runs of decisions; improving resource allocation).

(1) 2. Would be useful mostly as a training device.

(1) 3. If a different conceptual approach is used and a satisfactory model developed.

Representative remarks of those responding "no."

(7) 1. It might not be worth the time, effort, or money involved (i.e., cost might be prohibitive if model is made sophisticated enough to be useful; the money could be better spent on more teachers, etc; experience in Washington indicates that this would be a questionable expenditure).

(1) 2. More experience is needed, possibly with more limited models, before a decision at this level is made.

(1) 3. A regional model might be more practical.

Representative remarks of those responding "undecided."

(3) 1. Only if outside funds can be made available.

(3) 2. Not until preliminary studies demonstrate the usefulness to the school system of such an investment.

Discussion:

Responses to this question reinforce what was suggested after the previous question. The experience appears to have led those who had no other exposure to simulation to mistrust the approach. It would appear to be difficult, if, at all possible, to move most participants to take further action on the use of simulation as a planning tool at this time - at least not until another, and positive, experience is supplied.

No doubt reactions of participants to this question were influenced to some degree by the present budgetary crisis of the school system. It would be a mistake, however, to attribute the entire reaction to this one factor.

Objective 4: To explore the possibility of collaborating with Applied Simulations International, Inc. in the development of a model to be used by The School District of Philadelphia.

Preliminary discussions have raised the possibility of trying "Telecity," a high school level city model, in several high schools. Beyond this, no further avenues were explored, and in the light of the current experience, it is highly unlikely that they will be at this time.

Objective 5: To develop in the personnel responsible for the development and evaluation of new educational programs a heightened awareness of the great extent to which the various aspects of the urban problem are interrelated.

Objective 6: To improve the planning skills of the participants by:

a. Demonstrating the need for cooperation among many different groups in attempting to make any progress in the solution of the problems of urban America.

b. Demonstrating the effect that time has on decisions.

c. Demonstrating the possible commonality of interests even among competing forces.

Question 6: Do you feel that the City II Model was successful in:

a. Demonstrating the need for cooperation among many different groups in attempting to make any progress in the solution of the problems of urban America.

Response:

18	Yes
6	?
4	No
1	No response

b. Demonstrating the effect that time has on decisions.

Response:

15	Yes
6	?
7	No
1	No response

c. Demonstrating the possible commonality of interests even among competing forces.

Response:

17	Yes
9	?
2	No
1	No response

Reasons given by participants for responses were scattered, and twelve participants declined to comment. Some representative comments are:

(5) 1. We don't really know, because the computer broke down.

(4) 2. These things were accomplished by placing participants in positions of having to cooperate with each other.

(2) 3. The model was too complicated and the objectives were too poorly defined.

(1) 4. Better leadership (theirs or ours) might have improved it.

(1) 5. Anyone who has had a college course in political science or a good high school civics or urban affairs course should know these three things anyway.

Discussion:

Positive responses in these areas are considered a reaffirmation of the feeling that City Model can be an effective instructional tool. Those commenting appeared to be reacting to their experience with the model rather than to the model in principle, and this is entirely reasonable.

Prior rejection of the model (see question 2) may have been its rejection as a planning device rather than as a training device.

As a general assessment of the experience, participants were asked:

Question 5: If there had been no computer "hang-ups" and the model had operated as described, what value would the experience have had for you in your present position with The School District of Philadelphia?

Response:

0	No value at all
6	Little value
13	Moderate value
7	Great value
0	Very great value
3	No response

Comments offered by participants were scattered. Some noted the value of learning about simulation. Others indicated that the experience had been interesting, but there was no applicability to their present positions. Comments were generally lukewarm.

Discussion:

Participants appeared to be generally neutral to the project. Perhaps they were being polite. It is clear, however, that little enthusiasm was generated.

Objective 3: To explore the possibility of using simulation models to:

a. Aid in educational decision making.

b. Train educational administrators.

c. Select personnel for educational administration positions.

Question 3: Do you feel that the computerized simulation model of a (our?) school system would have value:

a. As an aid in making decisions about school, district, or school system administration.

Response:

[18] Yes

[5] ?

[6] No

Representative remarks of those responding "yes."

(9) 1. It could serve as a way of examining alternatives and relationships.

(2) 2. Only if the model could be made predictive.

Representative remarks of those responding "?."

(2) 1. A good model might have value, but the financial and staff problems might be prohibitive.

(1) 2. Such models are useful for demonstrating the need for cooperation, coordination, and purposeful planning.

(1) 3. The value depends on training and understanding of decision roles and implementation processes.

Representative remarks of those responding "no."

(3) 1. The model is not predictive.

(1) 2. It is too complex.

(1) 3. It would need considerable sophistication. At best it is still a "monopoly" game.

(1) 4. There are too many uncontrolled (uncontrollable?) variables.

b. As an aid in making decisions about curricular offerings?

Response:

5	Yes
14	?
10	No

Representative remarks of those responding "yes."

(3) 1. It could provide information which is not now available.

(1) 2. If the model were predictive.

Representative remarks of those responding "?."

(6) 1. A simulation model might not be feasible in this area (i.e., variables involved are not sufficiently concrete).

(2) 2. If the model could be made predictive.

(2) 3. I do not know enough about simulation to judge.

Representative remarks of those responding "no."

(5) 1. It is not possible to make a valid predictive model (i.e., not enough is known about the effects of decisions that would be involved).

(2) 2. The area is too complex for simulation.

c. As an aid in the training of educational administrators?

Response:

22	Yes
5	?
2	No

Representative remarks of those responding "yes."

(7) 1. It would provide practice in decision making.

(3) 2. It would demonstrate the complexities of the decision making process.

(3) 3. The effectiveness of the approach for training has already been demonstrated.

Representative remarks of those responding "?."

(2) 1. A good model might have value.

(2) 2. It might provide a better understanding of the effects of decisions.

Representative remarks of those responding "no."

(1) 1. It is too complex.

d. As an aid in the selection of administrative personnel?

Response:

6	Yes
14	?
9	No

Representative remarks of those responding "yes."

(3) 1. It could be used as an "in-basket" technique.

(1) 2. If one can develop the criteria for evaluating the decisions and standardize the actions of the other players.

(1) 3. If the model could be made predictive.

Representative remarks of those responding "?."

(5) 1. This technique may not be appropriate for personnel selection (i.e., too subjective an area; tells nothing of his ability to work with others).

(2) 2. If a criterion of success can be determined.

(1) 3. Possibly as an "in-basket" technique.

Representative remarks of those responding "no."

(2) 1. Simulation is not sufficiently advanced to be used for this purpose.

(2) 2. Simulation is not appropriate for this purpose.

(1) 3. There are no criteria of success.

Discussion:

Participants clearly rejected the idea of the use of simulation either for making curricular decisions or for the selection of administrative personnel. The nature of the model observed was not such that it would lead most participants to believe that it could address itself to either area. This would argue for a broader range of experiences with simulation models before judgments in this area are made.

Most participants saw the value of simulation as a training tool. This is really one aspect of its perception as educational software.

Although most participants were unwilling to accept City Model or a major commitment to simulation, a majority indicated that they felt that a school model had potential as an aid in decision making. Many saw that it would provide an opportunity to examine alternatives before they are put into practice. It should be made clear, however, that in this question participants were responding to simulation in general, and not to the specific model used. Further exploration of this area (i.e., examination of other models) might well be worthwhile.

At the end of the questionnaire, participants were offered the opportunity to make additional comments. Fifteen took advantage of it. Most comments made related to the operation of the model, or possible uses for it. Some representative comments follow:

(7) 1. Comments relating to operation of the model.

a. I found the whole experience frustrating and disappointing. The open bull sessions we had were outstandingly unsuccessful and non-communicative. When we learned that the operators were stalling for time and using the time for sales promotion, it was bad.

b. The orientation session should be used to orient people and not to build an ego. Do little talking after the orientation session.

c. Debug.

d. We use much greater care in the systems design, problem analysis, and in the establishment of fail-safe and corrective procedures in The Philadelphia School District payroll than was exhibited by the City Model Project Team.

e. I seriously recommend that if this model is to be used for instructional purposes that a component of the project devote itself to that aspect alone. The poor demonstration during our visit set system theory back twenty years in acceptance by non-practitioners.

(3) 2. Comments on possible uses of the model.

a. It could be used to help community people understand the process and possibly become less pressing in their demands once they see the problems.

b. Like many big, expensive projects, this has little value for the practitioner or administrator, although it could be used successfully as an instructional device for high school upper classmen in an urban affairs course.

c. I would like it for the school system in a less sophisticated form for use in training students in the complications of decision making.

CONCLUSION AND RECOMMENDATIONS

The project was a failure in that it generated no further exploration of the use of simulation as an aid to planning in the school system. This was due largely to the failure of the model to operate. Another contributing factor was that the program was premature. Exposure of a large number of Research, Planning, and Curriculum personnel should have been preceded by a more intensive and extensive investigation by a much smaller group.

The following recommendations appear to be justified by the experiences with and reactions to this project:

1. Conduct an intensive and extensive investigation of the current state of simulation, including models available, before becoming involved with specific models or model development.

2. Thoroughly investigate the operation of any particular model (i.e., stage of development, instructional effectiveness, backup system, etc.) before exposing a large number of people to it.

3. Conduct an intensive investigation of simulation programs available for instructional purposes, to the end that specific recommendations can be made as to the desirability and feasibility of trying them in the schools.

4. After going through the above three steps, investigate the desirability of conducting a limited trial of Telecity, the high school simulation model of Applied Simulations, Inc. in Philadelphia.

APPENDIX A

THE SCHOOL DISTRICT OF PHILADELPHIA

MEMORANDUM

TO	NAME AND OFFICE PARTICIPANTS, SIMULATION MODEL PROJECT	FILE NO
		DATE December 22, 1969
FROM	NAME AND OFFICE Irvin J. Farber	SENDER'S TELEPHONE 3792
SUBJECT	FINAL REPORT	

It is necessary for us to submit a final report to the U.S.O.E. on our Simulation Model Project. This will also provide an opportunity to pool our thinking about the experience and possible follow-ups to it. A copy of the report will be distributed to each participant.

The following questionnaire is designed to elicit your reactions to the project in terms of its objectives. A copy of the objectives as stated in the proposal is appended to this instrument.

Since impressions tend to fade with time, please complete and return this questionnaire as soon as possible. I would appreciate having all responses by Friday, January 9, 1970.

Note: Please don't let the length of this questionnaire "throw" you. We left a lot of room for responding.

THANK YOU VERY MUCH FOR YOUR COOPERATION.

IVF:fsk
Enclosures

SIMULATION MODEL PROJECT

Objectives

This program is designed to allow key research and planning personnel to begin exploring the possibilities of developing simulation models for use in the Philadelphia school system. This will be done by having thirty persons participate for two days in the operation of the City I, a computer-assisted urban development simulation model. The users of the model act as decision makers, and the interaction of their decisions made over time causes changes in the composition and size of this metropolitan area. The model allows the users to explore many possible future courses of action both quickly and at low cost. Also, it is hoped that some of the features inherent in the urban problem which are demonstrated by the model will be useful to urban educators. The program has these objectives:

- To familiarize key research and planning personnel in the Philadelphia school system with the nature and operation of a sophisticated simulation model.

- To provide a learning experience which can be used as a springboard for thinking about the possibility of developing a simulation model, or models, for use in the Philadelphia school system.

- To explore the possibility of using simulation models to
  a. aid in educational decision making.
  b. train educational administrators.
  c. select personnel for educational administration positions.

- To explore the possibility of collaborating with the Washington Center for Metropolitan Studies in the development of a model to be used by The School District of Philadelphia.

- To develop in the personnel responsible for the development and evaluation of new educational programs a heightened awareness of the great extent to which the various aspects of the urban problem are interrelated.

- To improve the planning skills of the participants by
  a. demonstrating the need for cooperation among many different groups in attempting to make any progress in the solution of the problems of urban America.
  b. demonstrating the effect that time has on decisions.
  c. demonstrating the possible commonality of interests even among competing forces.

THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Research and Evaluation
Field Research Services

SIMULATION MODEL PROJECT

FINAL REPORT QUESTIONNAIRE

_____ _____
Name Position

1. Do you feel that you have gained added familiarity with a "Sophisticated Simulation Model?"

☐ Yes. In what way?

☐ No. Why not?

☐ Undecided. Comments?

2. Do you believe that the Philadelphia school system can benefit from the use of the City II (the one we played) simulation model?

☐ Yes. How?

☐ No. Why not?

☐ Undecided. Comments:

3. Do you feel that the computerized s mulation model of a (our?)school system would have value:

a. as an aid in making decisions about: school, district, or school system adminis:ration?

☐ Yes ☐ ? ☐ No Please explain:

b. as an aid in making decisions about: curricular offerings?

☐ Yes ☐ ? ☐ No Please explain:

c. as an aid in: the train ng of educational administrators?

☐ Yes ☐ ? ☐ No Please explain:

d. as an aid in: the sele:tion of administrative personnel?

☐ Yes ☐ ? ☐ No Please explain:

4. We were told that City II took about two years to build and cost about $300,000. Do you think that a computerized school system model would be of sufficient benefit to the Philadelphia school system to justify this kind of an investment?

☐ Yes. In what way?

☐ No. Why not?

☐ Undecided. Please explain.

5. If there had been no computer "hang ups" and the model had operated as described, what value would the experience have had for you in your present position with The School District of Philadelphia?

- ☐ No value at all
- ☐ Little value
- ☐ Moderate value
- ☐ Great value
- ☐ Very great value

Please explain:

6. Do you feel that the City II model was successful in:

a. demonstrating the need for cooperation among many different groups in attempting to make any progress in the solution of the problems of urban America.

☐ Yes ☐ ? ☐ No

b. demonstrating the effect that time has on decisions.

☐ Yes ☐ ? ☐ No

c. demonstrating the possible commonality of interests even among competing forces.

☐ Yes ☐ ? ☐ No

Question 6 continued.

Please give reasons for your responses:

7. Please use this space for any additional comments or recommendations you wish to make.

THANK YOU VERY MUCH FOR YOUR COOPERATION.

IJF:fsk
12/22/69

THE PHILADELPHIA INQUIRER.

SUNDAY MORNING.

DECEMBER 7, 1969

Phila. Teachers 'Play Game' to Develop City

By JOHN P. CORR
Of The Inquirer Staff

WASHINGTON, Dec. 6. — The Department of Health, Education and Welfare, which has been accused of attempting some curious schemes, is trying to put a city into a machine so that social scientists can stop using real cities as laboratories.

Last week a group of administrators from the Philadelphia public school system, who have their eyes on Dr. Peter House's machine for other resons, were here to help him by playing the "City Game."

And the U. S. Office of Education — which also has its eye on Dr. House's machine — offered to foot the bill for the Philadelphians who have come here for the two days it takes to play.

TEAMS FORMED

The players were divided into teams, each representing such groups as politicians, businessmen, community leaders and school authorities. The teams then went to work doing the same kinds of things their counterparts in reality do all the time. They built factories, made deals, changed zoning and built new schools. Their decisions were fed into the computer and they learned right away the effects of their decisions, many of which were unfortunate.

Then they went into a second round of decision-making — this time with a clearer idea of what they were about and the effect of the decisions on the city as a whole.

COMMITTEES FORMED

There are four such rounds and, by the time its over, the politicians and educators and community leaders and businessmen are making compromises, holding joint meetings, forming committees.

More importantly, they also are getting angry at each other, suspicious, friendly and disgusted, in short, all of the things that people can do and a lot of the things that Dr. House wants to put into his machine.

Just firm facts are not sufficient to convert a computer into a laboratory for testing the effects of change on cities. People make the decisions that change cities and people are not always motivated by firm facts alone.

TRAINING DEVICE

Dr. House said that his present machine is not capable of predicting consequences. While he is developing one that may be able to do that, the present model is being used as a training device and to collect information.

The people from the Philadelphia school system had not been playing the game long when they began to ask whether the computer they were using could be programmed to reflect the various components of the school system.

Dr. John Hayman, director of the school system and mayor of the game city, said it is "just possible" that Dr. House's machine may someday be of interest to the school system "as either a planning or training tool."

CITY IS LABORATORY

Dr. House, who is president of the non-profit firm which is attempting to equip a machine to simulate a city, said something must be done to give the social scientist the same research power as a physical scientist.

"Most scientists have an idea and they go into the laboratory and try it out a hundred times before they even begin to think about making a decision," he said.

"When it comes to our cities, where we can least afford to make a mistake, we have no laboratory but the city itself.

"If the idea doesn't work, the city is badly hurt, perhaps irreparably."

And that is why he believes he is working against time, and why he is always looking for somebody new to play the city game.